ED 371 004   TM 021 631

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TITLE   Broadening the Concept of Engagement: Inclusion of
              Perspectives on Adolescence.
PUB DATE   Apr 94
NOTE   29p.; Paper presented at the Annual Meeting of the
              American Educational Research Association (New
              Orleans, LA, April 4-8, 1994).
PUB TYPE   Reports - Research/Technical (143) --
              Speeches/Conference Papers (150)

EDRS PRICE   MF01/PC02 Plus Postage.
DESCRIPTORS   *Adolescents; *Alienation; Child Development;
              Developmental Psychology; Educational Environment;
              *Emotional Response; Family Influence; High Schools;
              High School Students; Honors Curriculum; Interviews;
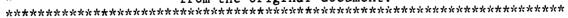   Peer Relationship; Student Attitudes; *Teacher
              Student Relationship
IDENTIFIERS   *Student Engagement

ABSTRACT
        Current knowledge about adolescent development
(drawing primarily from developmental pediatrics and psychology) is
reviewed to determine whether research and theory can help deepen
understanding of why high school continues to be an alienating
experience for large numbers of students, and this question is
examined through responses of high school students to questions
relating to student engagement. Sophomores and seniors (n=178) in
regular and honors classes at nonurban high schools in Florida were
interviewed in depth for the study. Chief among the findings is that
adolescents do not sharply distinguish between intellectual and
emotional matters; difficulties in grasping the content of courses
are not separated from feelings they have formed about their
teachers' personalities. They make an effort to engage when they feel
that their teachers care about them personally. Their most poignant
complaints have to do with the ways schools prevent opportunities for
socializing. Many school structures and policies act in ways counter
to the adolescent's needs and serve to reduce student engagement.
Mismatches in the school experiences of adolescents are described. To
increase the commitment and affiliation of high school students the
notion of engagement needs to be expanded to include values and
desires indigenous to adolescents. (Contains 36 references.) (SLD)

Broadening the concept of engagement: Inclusion of perspectives on adolescence

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Running head: BROADENING THE CONCEPT OF ENGAGEMENT

Broadening the concept of engagement: Inclusion of perspectives on adolescence

In general there has been a conceptual shift away from thinking of adolescence as ι period of "sturm und drang," of inevitable emotional turmoil, moodiness, and rebellion. Developmental psychologists have proposed a positive framework, one that defines the developmental tasks of adolescents. These include [1] the search for individual identity and personal values, [2] acquisition of social skills and the competencies required for adult roles (e.g., problem solving and decision making), [3] achieving emotional independence from parents, [4] reconciling peer acceptance and achievement motivation, and [5] experimentation with a wide variety of activities and attitudes.

I. M. Evans and A. K. Matthews (1992) , 233

This perspective [about adolescence] details the multiple dimensions of individual development in physical, cognitive, and socioemotional growth that should be accompanied by a supportive school learning environment.

J. H. Braddock II and J. M. McPartland, (1993), 136

Introduction

The purpose of this paper is to review the current knowledge base about adolescent development (drawing principally from developmental pediatrics and psychology) in order to determine whether research and theory in that field can help deepen our understanding of why high school continues to be predominately an alienating experience for large numbers of students. Symptoms of this alienation range through a gamut of counter-productive behaviors: from inattention and

disruption in classrooms, to violent and unlawful activities on school grounds, to extreme forms of disconnecting from school and society--substance abuse, dropping out, felonious crime, fatal accidents, and suicide.[1]

In a recent book, Fred Newmann and colleagues at the National Center for Effective Secondary Schools attributed low levels of academic achievement to American high schools' failure to "engage" a majority of students in learning. [2] Much of the theorizing that has accompanied discussions of engagement display an nearly exclusive orientation toward intellectual competency; emphasis is placed primarily on identifying (and eliminating) barriers which obstruct individual students' commitment to and investment in fulfilling the academic tasks of school. This explanatory schema fails to acknowledge the multifaceted aspects of adolescent development which comprises changes in the realm of affect as well as cognition.

Applying the Concept of Engagement to Understand Students' Motives

for Attending High School

Asked by our state Department of Education to investigate why Florida ranks last in high school graduation rate (58.6% in 1989), we began by surveying the literature on at risk students for explanatory schema. The concept we found most persuasive, prior to visiting schools, was that of engagement. Originally construed by Fred Newmann (1981) as the antonym and antidote for student alienation, engagement has consistently appeared in Newmann's work and that of his colleagues at the Center for the Study of Effective High Schools, most notably, Gary Wehlage (Newmann 1989, Wehlage, 1989a, 1989b). The incisiveness and

abundance of their writing was primarily responsible for the shift that occurred during the 1980s in explaining widespread uninterest in learning and early school leaving. Analysis moved away from identifying unalterable student characteristics such as socioeconomic background and previous academic history which had characterized a great deal of research on dropping out early in the decade (e. g. Sewell & Hauser, 1980, Natriello, 1984). Attention began to be directed toward modifying institutional factors such as teachers' instructional strategies (Gamoran, 1991), curriculum content (Stevenson, 1990; Miller, Leinhardt & Zigmond, 1988) and punishment/reward structures (Cullen, 1991).

After interviewing hundreds of general track students about their perceptions of high school, we tried applying the engagement/disengagement explanatory scheme to our data and found that with our population the model left too many statements unaccounted for. [3] One possible reason for the incomplete fit between this clearly important conceptual framework and our data was that most of the studies which had used the concept of engagement had surveyed at risk students, especially those who were enrolled in special alternativ programs and schools designed to foster stronger commitment to learning, primarily vocational skills. We, on the other hand, had deliberately chosen to talk with students who weren't in trouble, either academically or behaviorally; nor were they the most ambitious academically (i.e., planning to attend research universities). Our sample was drawn from the great bulk under the normal curve to whom schools do not pay much attention because as a group it makes the least pressing claims. (The number of

claims may be high, owing to the distribution. In the suburban and rural school we sampled, average students comprised approximately two standard deviations, or 84%, but no urgency was associated with their situation, unlike the two tails, gifted and failing.)

The question we then had to ask was: What was present and what missing in the concept of engagement that made it inadequate for interpreting the perceptions of average high school students?

Methods and Data Source

One hundred seventy eight sophomores and seniors at six non-urban high schools around the state of Florida were interviewed in depth for the study. Individual interviews, ranging from one to two hours, were conducted with 101 general track students, while 77 honors and advanced placement students were interviewed in groups of four to six. Students were asked a series of open ended questions about such topics as relationships with schoolmates and teachers, participation in extracurricular activities, favorite and disliked courses, school rules, (all areas that the research on engagement had indicated mediated bonding to the educational enterprise, e.g., Finn, 1989). Student responses were typed directly into laptop computers. Individual interview transcripts were loaded into *Ethnograph* (Seidel, 1988), a software program that facilitates sorting and retrieval of coded transcripts.

The Concept of Engagement

Most writers who use the concept of engagement (e. g., Newmann,

Wehlage, Finn) are interested primarily in educational outcomes: achievement and attainment. Their underlying premise for increasing engagement is that eventually it rewards students with a job. This emphasis on future payoff does not jibe with the present-centered orientation of adolescents. Moreover, adolescents do not carefully distinguish between cognitive and social aspects of schooling, as these writers do. In re-examining Newmann and Wehlage's work in particular, we noted the that they both define engagement as "the student's psychological investment in learning, comprehending, and mastering knowledge or skills" (Newmann, 1989, p. 34; See also Wehlage, 1989b, p. 177). The emphasis here is placed exclusively on cognition. Yet our respondents had repeatedly told us that their interest in attending school was as much for socializing as for academic and vocational preparation. Therefore, any comprehensive conceptualization of engagement has to take into account the keen interest among adolescents in constructing peer relations and meeting members of the opposite sex. The presence of these affective needs points toward the necessity of incorporating features of adolescent development into any engagement model.

Note also that the Newmann-Wehlage definition conflates the disciplines of psychology and economics. Neither writer stipulates what exactly does the student "invest"? With whom or in what is the investment lodged? How long until the investment pays off? What is the payoff? The allure of this metaphor from the world of finance is particularly strong in Wehlage who calls for tighter articulation between schooling and work. Many of the students in our study had after school

jobs and reported that the juggling of the two was more a physical than a mental strain. At their current work sites (supermarkets, restaurants, resorts), they would have benefitted little had they had classroom practice in information sharing, cooperative learning, and group problem solving. Yet, such are the features Wehlage claims characterize [we believe unrealistically] the world of work that awaits high school graduates.

Much of the engagement literature bears this stamp of an idealized view about adulthood, entry into which is presumably marked by the advent of a willingness to delay immediate and personal gratification for the benefit of the common good, what Newmann (1981, p. 550) called "communality." The combining of democratic theory with putative adult behavior contradicts nearly everything we know about adolescence, a period marked by the onset of sexual experimentation (Brooks-Gunn & Furstenberg, 1989), solipsistic codes of morality (Gilligan, 1988), preeminence of peer culture (Feldman & Elliot, 1990), and skepticism of established authority (Steinberg, 1985). To recommend an adult view of engagement without also reckoning with the hedonism that the American economy exploits in adolescents is to disregard the cultural context which militates against engagement in cognitive tasks. The prevailing conception is too narrow, pointing as it does toward specialized environments for explicitly antagonistic adolescents. It does not help school people address the indifferent majority. What is needed is a conception of engagement that takes into account the developmental disposition of *all* adolescents.

Results of the High School Graduation Study

Chief among our findings was the fact that adolescents did not sharply

distinguish between intellectual and emotional matters. In their accounts of

classroom learning, difficulties they reported in grasping the content of their

courses were not separated from feelings they had formed about their teacher's

personality. They would make effort to engage the material if they felt the teachers

cared about them personally. Instructional strategies that were not accompanied

by a genuine interest in the students' own contributions were judged to be a

devaluing of their abilities (compare Sedlak et al., 1986). They respected school

rules if they thought they were being equitably enforced, but many noted

exceptions made on behalf of athletes or high achievers. Their most poignant

complaints had to do with the way schools were organized so as to completely

eliminate opportunities for socializing: the four minutes allotted to change class,

preventing a pause to chat; the crowded lunch line, leaving little time even to eat;

the failure to provide late activity buses so that those without personal

transportation could stay after school to attend club meetings or team practice; the

tracking system that virtually guaranteed they would not meet very many kids who

weren't from their own ethnic background or socioeconomic class.[4]

Wehlage pointed out that for at risk kids such counter-engaging policies and

practices reinforce the norm of low academic achievement. Our average students

had in place just enough family support and medium teacher expectation to keep

them in the building, occupying a seat, making few waves; in short, "sticking it

out" until they accumulated sufficient credits for a diploma. Attending high school was perceived to be a distasteful chore, not an initiation into adult community.

Integrating Current Knowledge and Research on Adolescence

into an Expanded Conceptualization of Engagement

This lack of fit between what our respondents told us were their motivations for attending school and current "investment" theories of engagement forced us to turn our attention to what is actually known about the behavior and thinking of adolescents as a first step toward developing a more inclusive conceptualization. A good place to start is the new two-volume Encyclopedia of Adolescence (Lerner, Petersen, & Brooks-Gunn, 1991), a work that not only consolidates our knowledge base about adolescence but explicitly recognizes the importance of this stage of the life span as an autonomous subject for cross-disciplinary study. The opening entry, on the concept of adolescence, sets forth five key events which are distinctive to this period (Konopka, 1991:10-13). They are: 1) sexual maturation, 2) withdrawal of and from adult protection, 3) consciousness of self in interactions, 4) uncompromising evaluation of values, and 5) experimentation. Let us examine each of these events a little more closely to see how they may impact the capacity and inclination of secondary students to engage academically and socially.

Sexual maturation

Although the chief biological marker of puberty is increased testosterone levels in both sexes, social factors (namely, norms of peers, family, and region) strongly influence initiation into sexual activity.[5] While we continue to further

refine surveys of the prevalence of coitus, pregnancy, and sexually transmitted disease among teens, "what sexuality means to adolescents, how it relates to other aspects of teenage life, and what strategies teens use to manage or incorporate it into their lives, have not been studied in any detail" (Brooks-Gunn & Furstenberg, 1989. p. 249). What we do know is that adolescents are extremely interested in their own changing bodies and those of their age mates, and by extension, to all things corporeal. Yet the secondary school curriculum remains overwhelmingly a mental exertion, concentrating on memorization and retrieval of facts, formulas, and explanations, with few opportunities to explore knowledge through the carnal senses of touch, feel, smell, and taste.

The topic of sexuality is confined in schools to discussions of the anatomy and physiology of conception and childbirth in sex education classes. These classes and curricula have recently been subjected to a withering critique by a number of writers who conclude that, instead of being a place to explore sexuality safely, sex ed. is an ideological platform for making females responsible for controlling men's sexuality (See especially M. Fine, 1988; M. Whatley, 1988; Sears, 1992). Not only does the anti-sex rhetoric of abstinence portray women as simultaneously prey and provocatrix of men's innate, hormone-driven aggressiveness, it completely excludes any discussion of female desire, pleasure, or exploration.

Withdrawal of and from adult protection

Freudian theories have been advanced to explain the turbulent relations

between parents and their teenage offspring, ascribing to a reinvigorated sex drive emerging during adolescence the root of contention between generations (Freud, 1969). This theoretical construct--adolescence as a necessarily rebellious period-- has been empirically disconfirmed. The majority of adolescents report they remain very close to the thinking and standards of their parents (Petersen, 1989, Dornbusch, 1989). What is less frequently noted as a source of stress is that adolescence commonly coincides with the apex of mid-life difficulties facing adults. The greater the number of adult problems (divorce, remarriage, relocation, unemployment, vocational and personal dissatisfaction), the greater the pressure on adolescents to not contribute to family troubles.[6]

In a recent survey of 563 middle school students, one third reported that a major stressor on family structure (separation, divorce, or death) had occurred in the previous year (Millstein, Irwin, Adler, Cohn, Kegeles, & Dolcini, 1992). Changes in family structure result in adults having less attention for the student at home and less time for involvement with school. In the case of teenage students who have younger siblings at home, parents are more likely to be involved in their younger children's education; if a teenager is the last child, parents may have become weary (or wary) of further commitment to school. In short, the reciprocal support between home and school is much more difficult to sustain in families with adolescent students.

Consciousness of self in interactions

Still one of the most persuasive descriptions of the self in adolescence

remains stage five in Erik Erikson's invariant eight stage sequence of human

development. For Erikson (1968), the developmental task at this stage of the life

span is the forging of an identity (a self-definition) in the face of a welter of

potentially realizable roles (mate, caretaker, hero/ine). The complexity of this task is

heightened by the fact that at the very time adolescents are trying to gain greater

understanding and control of their lives their bodies are changing rapidly and

involuntarily.

> Pubertal change is a universal characteristic of adolescence and involves the
>
> most extensive and rapid changes in postnatal life. Perhaps more important
>
> than the physical changes themselves are the responses of the self and
>
> others to physical changes. Adolescents are acutely aware of their changing
>
> selves. (Petersen, 1989, 593)

Yet it has been pointed out repeatedly (e. g., Eccles & Midgley, 1989) that it is

precisely at the onset of puberty that middle schools start emphasizing competition,

comparison, and personal assessment, just when adolescents are beginning to take

their first tentative steps in fabricating a social identify and are intrigued with their

desire for intimacy. We will have more to say about this mismatch between the

organizational features of schools and events in adolescence in a later section.

Evaluation of values

According to contemporary American interpreters of the Soviet

developmental psychologist Lev Vygotsky (e. g,. Linn & Songer, 1991), the social

context in which learning occurs gains importance during adolescence. Put in

general terms, recognition of context and the importance adolescents attach to it is exemplified by their increased awareness of and susceptibility to influences and relationships. Put in specific terms: 1) societal norms become more pressing, producing status differences between different population sub-groups; 2) sex role stereotypes crystallize, channeling males toward the "hard" sciences and females toward the "caring" professions; 3) responsiveness to peers induces a sense of a performing self and at the same time a keen solidarity with their age cohort.

Our ability to estimate the power exercised by peers is compromised by the phenomenon of homophily, "like liking like" (Dornbusch, 1989, p. 248). Similarities in attitudes and behavior among adolescents is just as likely to be a product of self-selection as it is an indicator of exogenous influence. "Peers are more likely to reinforce existing attitudes than to produce novel forms of behavior. . . . There is a reciprocal relationship between the qualities of the group and the qualities of the adolescent" (p. 249).

The sensitivity of adolescents to evaluation by others is a function of their increased ability to take the role of an other. Paradoxically, at the same time as adolescents are in the process of formulating an identity, their emergent self is very labile, very easily decentered. No wonder. Teenagers are subject to very intense forms of scrutiny. Adults are continually sizing up their life-chances; peers of both sexes are judging their worthwhileness as a companion; and they themselves are trying to establish a boundary where their autonomy begins and their parents' authority ends.[7]

Experimentation

Let's start looking at this risk-taking, limit-testing behavior by considering some numbers compiled by the U. S. National Center for Health Statistics (1989). Safely beyond the vulnerability of childhood and before the incipient degeneration of adulthood, adolescence should be the stage in the human life-span with the lowest rates of sickness and death. It isn't. On the contrary, it is a period of time in which the widest variety of self-harming behaviors predominate. Accidental injury, homicide, and suicide account for 75% of all adolescent deaths. The prevalence of illness among teenagers, or what epidemiologists call morbidity, is directly related to their choosing to engage in high risk activities: unprotected sex (sexually transmitted diseases, unplanned pregnancies[8]), licit and illicit substance use (violent or criminal acts), operating or riding in motor vehicles when the driver is under the influence of alcohol and/or drugs (fatal or disabling injuries). In short, epidemiological statistics indicate that in their out-of-school life, adolescents engage in a variety of risky behaviors, often simultaneously, which they find exciting and adults label dangerous.

However, a good deal of the deviance ascribed to adolescents is actually what criminologists call a status offense; that is, a behavior considered appropriate for adults (purchasing alcohol or tobacco, engaging in consensual sex, making independent decisions) is deemed illegal for adolescents. Complicating their developmental task of self-identification is adolescents' legal "minor" status ("dependents" on their parents' income tax). Construed legally as persons without

full rights, their ability to give or withhold their consent is extremely circumscribed: they are not entitled to make judgements about issues that affect their body (e. g. marriage, abortion, alcohol consumption) and mind (compulsory schooling, curriculum frameworks, standardized tests).

Mismatch Between Organizational Features of Schools

And Events in Adolescence

We have previously cited the work of Eccles and Midgley on some stage-inappropriate features of school and events in adolescence. In this section we want to outline four crucial mismatches that occur in the school experiences of adolescents.

[1]   Departmentalization begins just as students become capable and desirous of sustained personal relationships. The result of this rotation is fewer opportunities to establish meaningful social bonds with peers and adults. (Exceptions are coaches, band leaders, and faculty advisors to clubs.)

[2]   Subject area specialists feel loyalty to their discipline, rather than to individual students. (They routinely see 125-150 a day.) The result is that specialist teachers tend to provide fewer learning opportunities arranged around small group projects; instead they rely on whole class lecture and memorization. This instructional strategy further impedes development of emotional ties to teacher and fellow students.

[3]   The increased stress on competitive nature of schooling (grades, honors, test scores) commences just as students are becoming interested in and

vulnerable to social groupings. The result is students experience conflict between fulfilling family expectations and winning peer approval.

[4]   Schools initiate more frequent and consequential episodes of public evaluation (e.g., retention, 99.5th percentile ranking on PSAT) just as sense of personal identity is being delicately assembled. The result is a growing discrepancy between social groups: those with optimistic prospects become segregated from those with pessimistic prospects.

Conclusion

If we are sincere in wanting to increase the commitment and affiliation of high school students to a process of life long learning and committed citizenship, then we need to expand the notion of engagement to include values and desires indigenous to adolescence. The most direct way to embark on the task of broadening the concept of engagement is to listen to what adolescent students have to say about the never-ending tide of well-intentioned efforts by grownups to increase academic achievement and attainment. Our study indicated that schools do not have in place any mechanism for directly assessing the impact of reform on their intended beneficiaries, most of whom are typical students who begrudgingly have to comply with more credits, tighter security, and less autonomy. Students at the six schools we studied had virtually no say about mandated changes in policies and regulations. Moreover, once changes were installed, no official reckoning of their effects on students' attitudes was undertaken. As a result, intelligent-sounding revisions have not made Florida high schools more attractive to

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adolescents and campaigns to graduate more students accomplish little. To deepen students' engagement fully will require institutionalizing a feedback loop so that adults and adolescents can figure out together which changes are working, which aren't, and why.

What does a review of the biosocial dimensions of adolescence tell us about engaging the attention of students? We know that it is a period of rapid and disorienting change, marked by strong impulses to probe boundaries. The cognitive and emotional conditions are ripe for both self-initiated inquiry and group-generated critique. Yet all too often, we structure learning in ways that thwart or devalue this urge to explore and challenge. We persist in asserting that "schools . . . function primarily to socialize young people to meet the expectations of the dominant culture and to select and train individuals for productive adult roles in society" (Frenzel & Blyth, 1991, p. 974), overlooking the possibility of *our engaging with* adolescents in investigating the processes of personal and social identity formation.

The result of such an alliance would mean 1) an emphasis on dialogue and critique in contrast to recitation and memorization 2) the inclusion of contemporary adolescent concerns--ephemeral as they may be--into the purview of cultural artifacts worth studying (What causes certain artists to become popular? Why do some fall out of favor?) 3) a much more contextualized presentation of the curricula, insistent on their relevance to the quotidian struggles adolescents face.

This is hardly a radical or novel proposal. Portions of this argument have been made recently by a number of writers working in very different areas of

curriculum; for example, sex education (Carlson, 1992) and high school science teaching (Linn and Songer, 1991). In these appeals for greater relevance and contextualization, adolescents' existing knowledge is valorized. If students are invited to see that knowledge is not a static given, but is rather a constructed and constructive process, then a space is created wherein adolescents have a part to play in, and a responsibility for, integrating new forms of knowledge into their lives. Openness to the contribution of the learner in the form of speculations, approximations, and trials entails a constructivist conception of knowledge; it is to conceive of our culture as a artifactual body whose shape and extension is constantly being reconfigured. When we admit that the generation of culture is actually a risky business, then adolescents will not hesitate to engage in the task.

1.   The following statistical information summarizes some of the important demographic and epidemiological dimensions of this age group.   The data are culled from Victor Strasburger and Robert T. Brown *Adolescent Medicine: A Practical Guide* (Boston: Little Brown, 1991) and Joy G. Dryfoos, *Adolescents at risk: Prevalence and Prevention* (New York: Oxford University Press, 1990).

In 1987 there were 28 million 10-17 year-olds in the U.S. (half a million more boys than girls). Eighty one percent were white, 15% black and 4% other. (Hispanics were included among the first two categories). One in four children lived with a single parent (1 in 2 for black children). Twenty five percent was also the rate for children living in poverty (Not all children who lived with a single parent were in poverty, but households headed by single women were preponderantly below the poverty line.)

The three leading causes of death for this age group are: accidents, homicide, and suicide. Sixty percent of the fatal accidents were automobile collisions, the majority of which involved the use of intoxicants. Annually, over 5500 young people are murdered, primarily by people they know. The homicide rate for Black males (35.9) is six times that of white males. In the last three decades suicide rates of young people have tripled. It is currently 9 per 100, 000; this translates to over 5000 deaths per year. The rate for 16 year olds is 100 times that of 12 year olds White males have the highest suicide rate (14.3). Males are five times more likely than females to be successful in their attempts primarily

because they select lethal methods (firearms, hanging, jumping) rather than ingestion. Females attempt suicide nine times more frequently than males. Nearly half of female secondary students surveyed report that they have given "serious thought" to ending their lives. The AMA in its 1988 White Paper on adolescent health reported that 20% of females and 15% of males manifested symptoms of clinical depression.

Dryfoos concludes her overview with these words: "The picture that emerges from these statistics is very disturbing: excessively high rates of stress and overexposure to violence, and excessively high rate of risk taking behavior" (p. 27).

2.   Fred M. Newmann, ed. *Student Engagement and Achievement in American Secondary Schools* (New York: Teachers College Press, 1992).

3.   A copy of the final report of this research project, "The Route to Graduation: perceptions of general curriculum students," is available from the Office of Policy Research and Improvement, Florida Department of Education, Tallahassee, FL 32399; it is also available on microfiche (ERIC Document Reproduction Service No. ED 327 620).

A 15 page executive summary of the final report entitled "Understanding Florida's Graduation Rate" appeared in a publication of the Florida Institute of Government, the *Journal of STAR Research* (Volume 2, 1991). [STAR is an acronym for Service Through Applied Research]. Copies of the executive summary may be obtained by writing the Florida Institute of Government, 519½ East Tennessee Avenue, Tallahassee, FL 32308.

4.   A generous selection of what these students had to say on such matters as school rules and extracurricular activities appears in Sandra B. Damico, & Jeffrey Roth, , 'A Different Kind of Responsibility'; Social and academic engagement of general track high school students, in: Robert Donmoyer and Raylene Kos (Eds) *At-Risk Students: Portraits, policies, programs, and practices* (Albany, State University of New York Press, 1993) pp. 229-245; 416-418.

5.   Present thinking about the onset of sexual maturation is summarized by John Bancroft in his "Introduction" to *Adolescence and Puberty* (1991): " . . . even though there is clear evidence of hormonal control of sexual behavior, the expression of that behavior can still be radically affected by environmental and social factors" (p.4). Specifically, pronounced gender differences in the experience of puberty have been noted. Bancroft cites one of the studies in *Adolescence and Puberty*, (J. R. Udry, "Hormonal and social determinants of adolescent sexual initiation," pp. 55-75) which found that the onset of sexuality in males was related directly to rising levels of androgen, whereas in females it was mediated through friendship groups rather than hormone levels. Bancroft concludes his introduction with the claim that "social learning has a greater influence on the sexual development of girls that it does on that of boys" (p. 5). Bancroft offers a sociobiological explanation to support his conclusion: Women have a shorter fertile life than males and are able to replicate themselves far fewer times over the lifespan. Therefore they have to be more discriminating n their choice of partners.

On the other hand puberty does start on average two years earlier for females than males. The current age for menarche for girls in the U. S. is 12.2 (a

level that has declined 6 years since the turn of the century). Boys are not fecund until 14, though they are capable of coitus. Throughout this period there are highly noticeable variation within age and sex groups. It is not uncommon for a middle or high school classroom to contain students who more resemble students in other grades in terms of their physical and social maturation than they do their classmates.

6.   A distinguished American psychiatrist estimated that approximately 20% of adolescents are "deeply troubled" by their unstable family conditions (mental illness, marital conflict, economic difficulties). Daniel Offer, "Adolescent development: A normative perspective," in A. Frances and R. Hales, Eds., *Annual Review, Vol. 5* (Washington, DC: American Psychiatric Association, 1986)

7.   Beatrix A. Hamburg reports that by the end of middle school adolescents spend twice as much time with peers as they do with their parents; Mihali Czikszentmihalyi claims the average teenager spends not more than 3 minutes a day with her/his father. Both writers make these points in chapters they contributed ("Psychosocial Development" and "Evolution of Adolescent Behavior," respectively) to *Comprehensive Adolescent Health Care*, ed. Stanford B. Friedman, Martin Fisher, and S. Kenneth Schonburg (St. Louis: Quality Medical Publishing, 1992).

8.   The U.S. has the highest rates of teenage pregnancies and teenage births in the Western world. One million teens become pregnant each year: 470,000 culminate in live births, 400, 000 in elective abortions, and the remainder are spontaneous abortions or stillbirths. Thirty thousand teens under the age of 15

become pregnant each year. It has only recently come to light that the majority of

these pregnancies are the result of incest or sexual abuse.

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